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EXAMINER

THANGAVELU, KANDASAMY

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

701

**Office Action Summary**

Application No.

09/580,700

Applicant(s)

SWIFT, LARRY

Examiner

Kandasamy Thangavelu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

1. This communication is in response to the Applicants' Response mailed on April 13, 2004. Claims 1, 12, 23, 34 and 36-41 were amended. Claims 1-41 of the application are pending. This office action is made non-final.

### ***Response to Arguments***

2. Applicant's amendments filed on April 13, 2004 have been fully considered. Claim rejections under 35 USC 112 First Paragraph are withdrawn in response to amendments made to independent claims 1, 12, 23, 34 and 36-41. Art rejections using additional prior art are included in this office action.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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4. Claims 1, 2, 8-10, 12, 13, 19-21, 23, 24, 30-32 and 34-41 are rejected under 35 U.S.C. 102(e) as being anticipated by **Engel et al. (EN)** (U.S. Patent 6,320,585).

4.1 EN teaches Displaying resource performance and utilization information. Specifically, as per Claim 1, EN teaches a system for determining and predicting performance of a communication device (CL1, L54 to CL2, L5; CL2, L14-29; CL9, L5-6); comprising:

means for specifying a report period, the report period corresponding to a reporting period of interest (CL2, L14-29; CL8, L20-23);

means for specifying a plurality of summary periods, each summary period corresponding to a different portion of the reporting period (CL1, L54 to CL2, L5; CL8, L22-34); and wherein each summary period corresponds to a plurality of days of interest (CL8, L20-22) and to a portion of the days of interest, and wherein the portion is less than a day (CL5, L8-15; CL7, L56-59);

means for processing a retrieved plurality of selected data parameters into a plurality of performance parameters corresponding to actual performance of the communication device during each of the summary periods (CL1, L54 to CL2, L5; CL2, L32-36; Fig. 2; CL8, L22-34); and a plurality of trend parameters to predict future performance of the communication device (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3); and

means for presenting and displaying the plurality of performance parameters associated with each summary period (CL1, L54 to CL2, L5; CL5, L8-15; CL7, L56-59), for presenting and displaying the plurality of trend parameters associated with the report period, in a trend report (CL2, L27-29; CL6, L22-36; CL8, L47-57; Fig 11; CL9, L55 to CL10, L3).

Per Claim 2: EN teaches a means for recommending a performance rating based upon the plurality of trend parameters (CL2, L21-29; Fig. 11; CL9, L55 to CL10, L3).

Per Claim 8: EN teaches that the processing means determines the plurality of trend parameters using a statistical regression algorithm (CL9, L26-54; Fig. 11; CL9, L55 to CL10, L3).

Per Claim 9: EN teaches that the statistical regression algorithm is a linear regression algorithm (CL9, L26-54; Fig. 11; CL9, L55 to CL10, L3).

Per Claim 10: EN teaches that the processing means further process the plurality of trend parameters to predict the time at which capacity of the communication device should be changed (CL2, L21-29; Fig. 11; CL9, L55 to CL10, L3; Fig. 10).

4.2 As per Claim 12, EN teaches a system for determining and predicting performance of a communication device (CL1, L54 to CL2, L5; CL2, L14-29; CL9, L5-6); comprising:

- a data poller, wherein the data poller collects a plurality of data parameters from the communication device (CL8, L22-25);

- a database which stores the data parameters (CL8, L25-34);

- a user interface, wherein a user specifies a report period, the report period corresponding to a reporting period of interest (CL2, L14-29; CL8, L20-23); and the user specifies a plurality of summary periods, each summary period corresponding to a different portion of the reporting period (CL1, L54 to CL2, L5; CL8, L22-34); and wherein each summary period corresponds to a

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plurality of days of interest (CL8, L20-22) and to a portion of the days of interest, and wherein the portion is less than a day (CL5, L8-15; CL7, L56-59);

a processor, wherein the processor retrieves a plurality of selected data parameters from the database such that the plurality of selected data parameters corresponds to the plurality of summary periods (CL8, L25-34; CL8, L37-38; CL8, L47-58); and wherein the processor processes the plurality of selected data parameters into a plurality of performance parameters which correspond to actual performance of the communication device during each of the summary periods (CL1, L54 to CL2, L5; CL2, L32-36; Fig. 2; CL8, L22-34); and wherein the processor trends the plurality of performance parameters into a plurality of trend parameters to predict future performance of the communication device (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3);

a data presentation module, the module presents the plurality of processed performance parameters and the plurality of trend parameters in a trend report (CL1, L54 to CL2, L5; CL2, L27-29; CL6, L22-36; CL8, L47-57); and

a graphical user interface which displays the trend report (Fig. 2; CL2, L2-5).

Per Claims 13 and 19-21, these are rejected based on the same reasoning as Claims 2 and 8-10, as shown above. Claims 13 and 19-21 are system claims reciting the same limitations as Claims 2 and 8-10, using the processor as the means.

4.3 As per Claim 23, it is a method claim based on Claim 1, reciting all the limitations of Claim 1 and in addition specifying the limitation:

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collecting a plurality of data parameters from the communication device.

EN teaches collecting a plurality of data parameters from the communication device (CL8, L22-25). EN teaches all other limitations as indicated in Paragraph 4.1 above.

Per Claims 24 and 30-32, these are rejected based on the same reasoning as Claims 2 and 8-10, as shown above. Claims 24 and 30-32 are method claims reciting the same limitations as Claims 2 and 8-10, as taught through out by EN.

4.4 As per Claim 34, it is a computer medium claim based on Claim 12, reciting all the limitations of Claim 12 except the following limitations of claim 12:

a data poller, wherein the data poller collects a plurality of data parameters from the communication device; and

a database which stores the data parameters.

EN teaches all the limitations of this claim as indicated in Paragraph 7.2 above. The limitations not included in this claim are inherent in the claim.

Per Claim 35, this is rejected based on the same reasoning as Claim 2, as shown above. Claim 35 is a computer medium claim reciting the same limitation as Claim 2, as taught through out by EN.

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4.5 As per Claim 36, EN teaches a method for determining and predicting; performance of a communication device (CL1, L54 to CL2, L5; CL2, L14-29; CL9, L5-6); the method comprising the steps of:

retrieving a plurality of selected data parameters from a communication device, such that the plurality of selected data parameters corresponds to a plurality of summary periods (CL8, L22-25); and wherein each summary period corresponds to a plurality of days of interest (CL8, L20-22) and to a portion of the days of interest, and wherein the portion is less than a day (CL5, L8-15; CL7, L56-59);

processing the plurality of selected data parameters into a plurality of performance parameters corresponding to actual performance of the communication device during each of the summary periods (CL1, L54 to CL2, L5; CL2, L32-36; Fig. 2; CL8, L22-34);

trending the plurality of performance parameters into a plurality of trend parameters to predict future performance of the communication device (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3); and

recommending a performance rating based upon the trend parameters (CL2, L21-29; Fig 11; CL9, L55 to CL10, L3).

4.6 As per Claim 37, EN teaches a system for determining and predicting performance of a communication device (CL1, L54 to CL2, L5; CL2, L14-29; CL9, L5-6); comprising:

a user interface, wherein a user specifies a report period, the report period corresponding to a reporting period of interest (CL2, L14-29; CL8, L20-23); and the user specifies a plurality of summary periods, each summary period corresponding to a different portion of the reporting



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period (CL1, L54 to CL2, L5; CL8, L22-34); and wherein each summary period corresponds to a plurality of days of interest (CL8, L20-22) and to a portion of the days of interest, and wherein the portion is less than a day (CL5, L8-15; CL7, L56-59); and

a processor, wherein the processor detects a plurality of selected data parameters from the communications device such that the plurality of selected data parameters corresponds to the plurality of summary periods (CL8, L25-34; CL8, L37-38; CL8, L47-58); and wherein the processor processes the plurality of selected data parameters into a plurality of performance parameters which correspond to actual performance of the communication device during each of the summary periods (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3); and wherein the processor trends the plurality of performance parameters into a plurality of trend parameters to predict future performance of the communication device (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3); and wherein the processor recommends a performance rating based upon the plurality of trend parameters (CL2, L21-29; Fig 11; CL9, L55 to CL10, L3).

4.7 As per Claim 38, it is a system claim based on Claim 13 (when claim 12 limitations are read into claim 13), reciting all the limitations of Claim 13.

This claim uses “means for” for specifying the components of the system, while Claim 12 lists the individual components. EN teaches all the limitations of this claim as indicated in Paragraph 4.2 above.

4.8 As per Claim 39, it is a method claim based on Claim 38.

EN teaches all the limitations of this claim as indicated in Paragraph 4.2 above.

4.9 As per Claim 40, EN teaches a transmitter (Fig. 1); comprising:

a user interface, wherein a user specifies a report period, the report period corresponding to a reporting period of interest (CL2, L14-29; CL8, L20-23); and the user specifies a plurality of summary periods, each summary period corresponding to a different portion of the reporting period (CL1, L54 to CL2, L5; CL8, L22-34); and wherein each summary period corresponds to a plurality of days of interest (CL8, L20-22) and to a portion of the days of interest, and wherein the portion is less than a day (CL5, L8-15; CL7, L56-59);

a processor, wherein the processor retrieves a plurality of selected data parameters from the database such that the plurality of selected data parameters corresponds to the plurality of summary periods (CL8, L25-34; CL8, L37-38; CL8, L47-58); and wherein the processor processes the plurality of selected data parameters into a plurality of performance parameters which correspond to actual performance of the communication device during each of the summary periods (CL1, L54 to CL2, L5; CL2, L32-36; Fig. 2; CL8, L22-34); and wherein the processor trends the plurality of performance parameters into a plurality of trend parameters to predict future performance of the communication device (CL9, L5-6; CL9, L16-54; Fig 11; CL9, L55 to CL10, L3);

and wherein the processor recommends a performance rating based upon the plurality of trend parameters (CL2, L21-29; Fig 11; CL9, L55 to CL10, L3); and

a data presentation module, the module presents the plurality of processed performance parameters and the plurality of trend parameters in a trend report (CL1, L54 to CL2, L5; CL2, L27-29; CL6, L22-36; CL8, L47-57; Fig 11; CL9, L55 to CL10, L3).

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4.10 As per Claim 41, it is a device claim for the receiver having the same limitations as Claim 40, a device claim for the transmitter. EN teaches all the limitations of this claim as indicated in Paragraph 4.9 above.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3, 14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Engel et al. (EN)** (U.S. Patent 6,320,585) in view of **VanDervort (VA)** (U.S. Patent 5,699,346).

7.1 As per Claim 3, **EN** teaches the system of Claim 1. **EN** does not expressly teach per claim 3, that at least one of the plurality of data parameters is a burst statistic. **VA** teaches that at least one of the plurality of data parameters is a burst statistic (Abstract, L1-2; CL1, L27-30; CL4, L50-56), as burst rate and burst size statistics are useful in determining how much network throughput beyond the limits of the network can be sold to the subscribers (CL4, L50-56). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **EN** with the system of **VA** that included at least one of the plurality of data parameters as a burst statistic, as burst rate and burst size statistics would be useful in determining how much network throughput beyond the limits of the network could be sold to the subscribers.

7.2 As per Claims 14 and 25, these are rejected based on the same reasoning as Claim 3 as shown above. Claims 14 and 25 are system and method claims reciting the same limitations as Claim 3, as taught through out by **EN** and **VA**.

8. Claims 4-7, 15-18 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Engel et al. (EN)** (U.S. Patent 6,320,585) in view of **VanDervort (VA)** (U.S. Patent 5,699,346), and further in view of **Grevious (GR)** (U.S. Patent 6,167,310).

8.1 As per Claim 4, **EN** and **VA** teach the system of Claim 3. **EN** does not expressly teach a means for specifying the number of the plurality of burst ranges. **GR** teaches a means for specifying the number of the plurality of burst ranges (CL24, L1-19), as that allows controlling

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the total energy of the data bursts by adjusting the burst range (CL24, L2-5). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **EN** with the system of **GR** that included a means for specifying the number of the plurality of burst ranges, as that would allow controlling the total energy of the data bursts by adjusting the burst range.

8.2 As per Claim 5, **EN** and **VA** teach the system of Claim 3. **EN** teaches a means for specifying the percentage range for preselected performance variable (CL1, L64 to CL2, L5; Fig 6; Fig 8; CL6, L30-36), as that allows determining for what proportion of the preselected period, the values of the preselected performance variable falls within that subrange and displaying in graphical form, the proportion of the preselected period of time that the values of the preselected performance variable fell within that range (CL1, L64 to CL2, L5). **EN** does not expressly teach a means for specifying the percentage range for each one of the plurality of burst ranges.

**GR** teaches a means for specifying the number of the plurality of burst ranges (CL24, L1-19), as that allows controlling the total energy of the data bursts by adjusting the burst range (CL24, L2-5). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the system of **EN** that included a means for specifying the percentage range for preselected performance variable with the system of **GR** that included specifying the number of the plurality of burst ranges, as that would allow determining for what proportion of the preselected period, the values of the burst range fell within that subrange and displaying in graphical form, the proportion of the preselected period of time that the values of the burst range fell within that range.

8.3 As per Claim 6, **EN** and **VA** teach the system of Claim 3. **EN** teaches that the processing means further comprises bandwidth utilization trending means which predicts future performance of the communication device relative to each bandwidth utilization range (CL9, L5-6; CL9, L16-54; Fig. 11), as that facilitates prediction of a time to reach a threshold number for bandwidth utilization (CL2, L 22-29). **EN** does not expressly teach the processing means further comprises a burst range trending means which predicts future performance of the communication device relative to each burst range.

**GR** teaches a means for specifying the number of the plurality of burst ranges (CL24, L1-19), as that allows controlling the total energy of the data bursts by adjusting the burst range (CL24, L2-5). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the system of **EN** that included the processing means further comprising preselected performance variable trending means which predicts future performance of the communication device relative to each preselected performance variable range with the system of **GR** that included specifying the number of the plurality of burst ranges, as that would facilitate prediction of a time to reach a threshold number for each burst range.

8.4 As per Claim 7, **EN**, **VA** and **GR** teach the system of Claim 6. **EN** does not expressly teach that at least one of the plurality of burst ranges is a total burst range corresponding to the total number of all bits transmitted during each of the plurality of summary periods. **VA** teaches that at least one of the plurality of burst ranges is a total burst range (burst size) corresponding to the total number of all bits transmitted during each of the plurality of summary periods (CL4,

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L50 to CL5, L4), as that enables the service provider to determine that the user properly subscribed his virtual connection and to determine how much network throughput can be sold to the subscribers (CL4, L50-62).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **EN** with the system of **VA** that included at least one of the plurality of burst ranges being a total burst range corresponding to the total number of all bits transmitted during each of the plurality of summary periods, as that would enable the service provider to determine that the user properly subscribed his virtual connection and to determine how much network throughput could be sold to the subscribers.

8.5 As per Claims 15-18 and 26-29, these are rejected based on the same reasoning as Claims 4-7 as shown above. Claims 15-18 and 26-29 are system and method claims reciting the same limitations as Claims 4-7, as taught through out by **EN**, **VA** and **GR**.

9. Claims 11, 22 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Engel et al. (EN)** (U.S. Patent 6,320,585) in view of **Colmant et al. (CO)** (U.S. Patent 6,144,662).

9.1 As per Claim 11, **EN** teaches the system of Claim 1. **EN** does not expressly teach that the performance rating corresponds to a port speed of a port residing in the communications device, wherein the port speed corresponds to the rate at which data is transmitted through the port. **CO** teaches that the performance rating corresponds to a port speed of a port residing in the

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communications device, wherein the port speed corresponds to the rate at which data is transmitted through the port (CL4, L10-12; CL1, L48), as high port speed provides a high packet throughput (CL2, L32).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the system of **EN** with the system of **CO** that included the performance rating corresponding to a port speed of a port residing in the communications device, wherein the port speed corresponded to the rate at which data would be transmitted through the port, as high port speed would provide a high packet throughput.

9.2 As per Claims 22 and 33, these are rejected based on the same reasoning as Claim 11 as shown above. Claims 22 and 33 are system and method claims reciting the same limitations as Claim 11, as taught through out by **EN** and **VA**.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 703-305-0043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

K. Thangavelu  
Art Unit 2123  
May 14, 2004



KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER